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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,216	08/30/2000	Tongbi Jiang	M4065.0227/P227	2311

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EXAMINER

PERT, EVAN T

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 09/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/652,216

Applicant(s)

JIANG ET AL.

Examiner

Evan Pert

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 and 66-104 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 and 66-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species II is acknowledged. Species II is drawn to embodiments with a "biased" conductive layer. Applicant's arguments in the earlier paper dated November 25, 2002 are noted with particular interest:

Applicant: The conductive layer in the present invention is unbiased and is used for a wholly different purpose [than Burr]." [p. 8, underlined emphasis original].

Now, applicant seemingly elects biased embodiments.

All restriction requirements of record are withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-30 and 66-104 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 98, 99, 103 and 104

Claims 98, 99, 103 and 104 recite, "said upper side of said substrate." There is lack of antecedent basis for "said upper side."

Claims 3, 8, 68 and 73

Claims 3, 8, 68 and 73 recite that the "unbiased conductive layer" (in the independent claims) is connected to a "bias voltage." This is contradictory, confusing and indefinite. This confusion is reflected in applicant's prosecution of this case:

First, applicant argues that the invention has an unbiased conductive layer wholly unlike Burr. Then, applicant elects “biased.” Since claims contradict each other and applicant contradicts applicant, the examiner is confused about what “biased” even means in this case.

What *does* “unbiased” mean in this case? Does connecting to ground mean “unbiased”? Does “unbiased” mean ‘electrically attached to the back side, but not electrically connected to anything else’? Does “unbiased” in the claims include a metal layer not in direct contact, such as a heat sink a few millimeters away?

Explanation and correction is required.

Claims 1, 66 and 96-104

Applicant argues that the claimed product is structurally different than the prior art because an electrically conductive layer on a backside is provided...

“...for removing unwanted voltages and electrical noise from the substrate to maintain a uniform bias voltage throughout the substrate” [all claims];

“...the conductive layer forming an electrical path...” [claims 96 and 102-104];
and

“...thereby removing...” instead of “...for removing...” [claim 97];

The fact that a layer is provided for a “purpose” might be *definitive* in structure in some cases. In the instant case, *the scope of structure* “for removing” is indefinite.

Prior Art Rejections

3. The examiner will apply relevant prior art when applicant has responded to the rejections under 35 USC 112, 2nd paragraph. If prior art is applied in the next action, the next action will be made non-final.

At this time, the examiner is not totally sure what structure(s) need to be searched for. For example, U.S. Patent 6,218,708 to Burr seemingly discloses a biased conductive layer [Figs. 1b, 2b] or no conductive layer [Figs. 1a, 2a].

When there is no conductive biased layer on the back side in Burr '708, one of ordinary skill *still has motivation* to add an unbiased conductive metal layer on the back side such as for "permitting the transistor chips to be bonded to a package" [p. 53, Modern Dictionary of Electronics, definition of "Back Metallization"].

These issues about a conductive layer on the back side and how it gets configured *structurally* will be addressed when applicant resolves the confusion set forth in the rejection under 35 USC 112 set forth in this Office Action.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Burr (U.S. 6,218,708) is cited for disclosing bias distribution regions in CMOS wherein a back metal layer is biased, grounded or not provided, with "noise" being "attenuated" [col. 4, lines 16-17].

The Modern Dictionary of Electronics is cited for teaching that "back metallization" has a useful purpose even when not electrically connected to anything.

Art Unit: 2829

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 703-306-5689.

The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 703-308-1233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.



EVAN PERT
PRIMARY EXAMINER

Evan Pert, BSEE, MSEE, PE

September 9, 2003